

## PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN THE APPLICATION OF:  
LAFFEND ET AL.

CASE NO.: CR-9715 B

APPLICATION NO.: 08/440, 293

GROUP ART UNIT: 1808

FILED: 12 MAY 1995

EXAMINER: H.J. LILLING

FOR: BIOCONVERSION OF A FERMENTABLE CARBON SOURCE  
TO 1,3-PROPANEDIOL BY A SINGLE MICROORGANISMDECLARATION OF BIOLOGICAL CULTURE DEPOSIT

Asst. Commissioner of Patents  
Washington, DC 20231

Sir:

I, Linda Axamethy Floyd, declare that:

I am an attorney of record for the owner of the above-identified application.

Cultures of the following biological materials have been deposited with the following international depository(s): American Type Culture Collection (ATCC), 12301 Parklawn Drive, Rockville, MD 20852, U.S.A. under conditions that satisfy the requirements of the Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure. A copy of the international receipt form stating the terms of the deposit pursuant to Rule 7.3 and viability statement issued pursuant to Rule 10.2 is attached hereto.

| Depositor's Identification of Organism       | International Depository Accession Number | Date of Deposit |
|----------------------------------------------|-------------------------------------------|-----------------|
| <i>Escherichia coli</i> bacteria, Dh5α, pKP1 | ATCC 69789                                | 18 April 1995   |
| <i>Escherichia coli</i> bacteria, Dd5α, pKP4 | ATCC 69790                                | 18 April 1995   |

I further aver that all restrictions on the availability to the public of the culture will be irrevocably removed upon the granting of a U.S. patent on the above-identified application.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted,



LINDA AXAMETHY FLOYD  
ATTORNEY FOR APPLICANTS  
REGISTRATION NO. 33,692  
TELEPHONE: 302-892-8112

Dated: 23 February 1996

Enclosure: Deposit Receipt



# American Type Culture Collection

12301 Parklawn Drive • Rockville, MD 20852 USA • Telephone: (301) 231-5520 Telex: 898-055 ATCCNORTH • FAX: 301-770-2587

## BUDAPEST TREATY ON THE INTERNATIONAL RECOGNITION OF THE DEPOSIT OF MICROORGANISMS FOR THE PURPOSES OF PATENT PROCEDURE

### INTERNATIONAL FORM

#### RECEIPT IN THE CASE OF AN ORIGINAL DEPOSIT ISSUED PURSUANT TO RULE 7.3 AND VIABILITY STATEMENT ISSUED PURSUANT TO RULE 10.2

To: (Name and Address of Depositor or Attorney)

E.I. du Pont de Nemours & Company  
Attn: S. Neil Feltham  
Central Research & Development  
Experimental Station, E301/319  
P.O. Box 80301  
Wilmington, DE 19880-0301

Deposited on Behalf of: E.I. du Pont de Nemours & Company (CR9692)

Identification Reference by Depositor: ATCC Designation

|                                     |       |
|-------------------------------------|-------|
| <i>E. coli</i> Bacteria, Dh5α, pKP1 | 69789 |
| <i>E. coli</i> Bacteria, Dh5α, pKP4 | 69790 |

The deposits were accompanied by:    a scientific description    a proposed taxonomic description indicated above.

The deposits were received April 18, 1995 by this International Depository Authority and have been accepted.

#### AT YOUR REQUEST:

We will inform you of requests for the strains for 30 years.

The strains will be made available if a patent office signatory to the Budapest Treaty certifies one's right to receive, or if a U.S. Patent is issued citing the strains and ATCC is instructed by the United States Patent & Trademark Office or the depositor to release said strain.

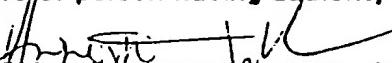
If the cultures should die or be destroyed during the effective term of the deposit, it shall be your responsibility to replace them with living cultures of the same.

The strains will be maintained for a period of at least 30 years after the date of deposit, and for a period of at least five years after the most recent request for a sample. The United States and many other countries are signatory to the Budapest Treaty.

The viability of the cultures cited above was tested April 20, 1995. On that date, the cultures were viable.

International Depository Authority: American Type Culture Collection, Rockville, Md. 20852 USA

Signature of person having authority to represent ATCC:



Date: April 24, 1995

Annette L. Bade, Director, Patent Depository

**MICROORGANISMS**

Optional Sheet in connection with the microorganism referred to on page 6, line 18-20 of the description

**A. IDENTIFICATION OF DEPOSIT\***

Further deposits are identified on an additional sheet

Name of depositary institution

AMERICAN TYPE CULTURE COLLECTION

Address of depositary institution (including postal code and country)

12301 Parklawn Drive  
Rockville, Maryland 20852  
US

Date of deposit

11 April 1996 (11.04.96)

Accession Number

55760

**B. ADDITIONAL INDICATIONS\*** (leave blank if not applicable). This information is continued on a separate attached sheet

In respect of those designations in which a European patent is sought, a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which the application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample. (Rule 28(4) EPC)

**C. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE\*** (If the indications are not for all designated States)

**D. SEPARATE FURNISHING OF INDICATIONS\*** (leave blank if not applicable)

The indications listed below will be submitted to the International Bureau later\* (Specify the general nature of the indications e.g., "Accession Number of Deposit")

E.  This sheet was received with the International application when filed (to be checked by the receiving Office)

(Authorized Officer)

The date of receipt (from the applicant) by the International Bureau is

was

(Authorized Officer)

**MICROORGANISMS**

Optional Sheet in connection with the microorganism referred to on page 6, line 21-24 of the description:

**A. IDENTIFICATION OF DEPOSIT:**

Further deposits are identified on an additional sheet

Name of depositary institution:

AMERICAN TYPE CULTURE COLLECTION

Address of depositary institution (including postal code and country):

12301 Parklawn Drive  
Rockville, Maryland 20852  
US

Date of deposit:

11 April 1996 (11.04.96)

Accession Number:

74363

**B. ADDITIONAL INDICATIONS:** (Leave blank if not applicable). This information is continued on a separate attached sheet

In respect of those designations in which a European patent is sought, a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which the application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample. (Rule 28(4) EPC)

**C. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE:** (If the indications are not for all designated States)**D. SEPARATE FURNISHING OF INDICATIONS:** (Leave blank if not applicable)

The indications listed below will be submitted to the International Bureau later. (Specify the general nature of the indications e.g., "Accession Number of Deposit")

E.  This sheet was received with the international application when filed (to be checked by the receiving Office)

(Authorized Officer)

The date of receipt (from the applicant) by the International Bureau is:

was

(Authorized Officer)

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

## IN THE APPLICATION OF:

LISA ANNE LAFFEND, ET AL.

CASE NO.: CR-9715-B

APPLICATION NO.: 08/440,293

GROUP ART UNIT: 1808

FILED: MAY 12, 1995

EXAMINER: H.J. LILLING

FOR: BIOCONVERSION OF A FERMENTABLE CARBON SOURCE  
TO 1,3-PROPANEDIOL BY A SINGLE MICROORGANISMDECLARATION OF BIOLOGICAL CULTURE DEPOSITAsst. Commissioner of Patents  
Washington, DC 20231

Sir:

I, Linda Axamethy Floyd, declare that:

I am an attorney/agent of record for the owner of the above-identified application.

Cultures of the following biological materials have been deposited with the following international depository(s):

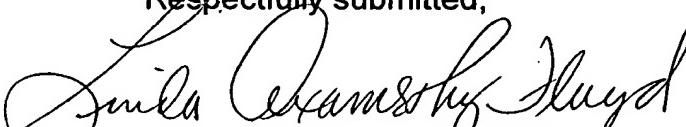
American Type Culture Collection (ATCC)  
12301 Parklawn Drive, Rockville, MD 20852, U.S.A.

under conditions that satisfy the requirements of the Budapest Treaty (a copy of acknowledgement letter stating the terms of the deposit is attached).

| Depositor's Identification of Organism   | International Depository Accession Number | Date of Deposit |
|------------------------------------------|-------------------------------------------|-----------------|
| <i>Pseudomonas aeruginosa, PA02845:p</i> | 55760                                     | April 11, 1996  |
| <i>Pichia pastoris MSP42.81</i>          | 74363                                     | April 11, 1996  |

I further aver that all restrictions on the availability to the public of the culture will be irrevocably removed upon the granting of a U.S. patent on the above-identified application.

Respectfully submitted,



LINDA AXAMETHY FLOYD  
ATTORNEY/AGENT FOR APPLICANTS  
REGISTRATION NO. 33,692  
TELEPHONE: 302-892-8112

Dated: 9 May, 1996

Enclosure: Deposit Receipt



# American Type Culture Collection

CR 9715A  
270017  
9692A

12301 Parklawn Drive • Rockville, MD 20852 USA • Telephone: (301)231-5520 Telex: 898-055 ATCCNORTH • FAX: 301-770-2587

## BUDAPEST TREATY ON THE INTERNATIONAL RECOGNITION OF THE DEPOSIT OF MICROORGANISMS FOR THE PURPOSES OF PATENT PROCEDURE

### INTERNATIONAL FORM

#### RECEIPT IN THE CASE OF AN ORIGINAL DEPOSIT ISSUED PURSUANT TO RULE 7.3 AND VIABILITY STATEMENT ISSUED PURSUANT TO RULE 10.2

To: (Name and Address of Depositor or Attorney)

E.I. du Pont de Nemours & Company  
Attn: S. Neil Feltham  
Central Research & Development Experimental Station  
E301/319, P.O. Box 80301  
Wilmington, DE 19880-0301

Deposited on Behalf of: The DuPont Company (Docket CR 9715A)

Identification Reference by Depositor: ATCC Designation

*Pseudomonas aeruginosa*, PA02845:pDT9 55760

The deposit was accompanied by:  a scientific description  a proposed taxonomic description indicated above.

The deposit was received April 11, 1996 by this International Depository Authority and has been accepted.

#### AT YOUR REQUEST:

We will inform you of requests for the strain for 30 years.

The strain will be made available if a patent office signatory to the Budapest Treaty certifies one's right to receive, or if a U.S. Patent is issued citing the strain, and ATCC is instructed by the United States Patent & Trademark Office or the depositor to release said strain.

If the culture should die or be destroyed during the effective term of the deposit, it shall be your responsibility to replace it with living culture of the same.

The strain will be maintained for a period of at least 30 years from date of deposit, or five years after the most recent request for a sample, whichever is longer. The United States and many other countries are signatory to the Budapest Treaty.

The viability of the culture cited above was tested April 17, 1996. On that date, the culture was viable.

International Depository Authority: American Type Culture Collection, Rockville, Md. 20852 USA

Signature of person having authority to represent ATCC:

Barbara M. Hailey

Barbara M. Hailey, Administrator, Patent Depository

Date: April 17, 1996



# American Type Culture Collection

CR 9715A  
9700 A  
96921

12301 Parklawn Drive • Rockville, MD 20852 USA • Telephone: (301) 231-5520 Telex: 898-055 ATCCNORTH • FAX: 301-770-2587

## BUDAPEST TREATY ON THE INTERNATIONAL RECOGNITION OF THE DEPOSIT OF MICROORGANISMS FOR THE PURPOSES OF PATENT PROCEDURE

### INTERNATIONAL FORM

#### RECEIPT IN THE CASE OF AN ORIGINAL DEPOSIT ISSUED PURSUANT TO RULE 7.3 AND VIABILITY STATEMENT ISSUED PURSUANT TO RULE 10.2

To: (Name and Address of Depositor or Attorney)

E.I. du Pont de Nemours & Company  
Attn: S. Neil Feltham  
Central Research & Development Experimental Station  
E301/319, P.O. Box 80301  
Wilmington, DE 19880-0301

Deposited on Behalf of: The DuPont Company (Docket CR9715A)

Identification Reference by Depositor: ATCC Designation

*Pichia pastoris* MSP42.81 74363

The deposit was accompanied by:        a scientific description X a proposed taxonomic description indicated above.

The deposit was received April 11, 1996 by this International Depository Authority and has been accepted.

#### AT YOUR REQUEST:

X We will inform you of requests for the strain for 30 years.

The strain will be made available if a patent office signatory to the Budapest Treaty certifies one's right to receive, or if a U.S. Patent is issued citing the strain, and ATCC is instructed by the United States Patent & Trademark Office or the depositor to release said strain.

If the culture should die or be destroyed during the effective term of the deposit, it shall be your responsibility to replace it with living culture of the same.

The strain will be maintained for a period of at least 30 years from date of deposit, or five years after the most recent request for a sample, whichever is longer. The United States and many other countries are signatory to the Budapest Treaty.

The viability of the culture cited above was tested April 17, 1996. On that date, the culture was viable.

International Depository Authority: American Type Culture Collection, Rockville, Md. 20852 USA

Signature of person having authority to represent ATCC:

Barbara M. Hailey  
Barbara M. Hailey, Administrator, Patent Depository

Date: April 18, 1996

**MICROORGANISMS**

Optional Sheet in connection with the microorganism referred to on page 6, line 24-28 of the description:

**A. IDENTIFICATION OF DEPOSIT:**

Further deposits are identified on an additional sheet

Name of depositary institution:

AMERICAN TYPE CULTURE COLLECTION

Address of depositary institution (including postal code and country):

12301 Parklawn Drive  
Rockville, Maryland 20852  
US

Date of deposit:

May 1996 (05.96)

Accession Number:

to be furnished when available

**B. ADDITIONAL INDICATIONS:** (leave blank if not applicable). This information is continued on a separate attached sheet

In respect of those designations in which a European patent is sought, a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which the application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample. (Rule 28(4) EPC)

**C. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE:** (If the indications are not for all designated States)

**D. SEPARATE FURNISHING OF INDICATIONS:** (leave blank if not applicable)

The indications listed below will be submitted to the International Bureau later\* (Specify the general nature of the indications e.g., "Accession Number of Deposit")

Day of Deposit

Accession Number of Deposit

**E.**  This sheet was received with the International application when filed (to be checked by the receiving Office)

(Authorized Officer)

The date of receipt (from the applicant) by the International Bureau is

wss

(Authorized Officer)

**MICROORGANISMS**

Optional Sheet in connection with the microorganism referred to on page 6, line 28-32 of the description.

**A. IDENTIFICATION OF DEPOSIT:**

Further deposits are identified on an additional sheet

Name of depositary institution <sup>4</sup>

AMERICAN TYPE CULTURE COLLECTION

Address of depositary institution (including postal code and country) <sup>4</sup>

12301 Parklawn Drive  
Rockville, Maryland 20852  
US

Date of deposit <sup>5</sup>

May 1996 (.05.1996)

Accession Number <sup>6</sup>

to be furnished when available

**B. ADDITIONAL INDICATIONS:** (Leave blank if not applicable). This information is continued on a separate attached sheet

In respect of those designations in which a European patent is sought, a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which the application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample. (Rule 28(4) EPC)

**C. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE:** (If the indications are not for all designated States)

**D. SEPARATE FURNISHING OF INDICATIONS:** (Leave blank if not applicable)

The indications listed below will be submitted to the International Bureau later <sup>8</sup> (Specify the general nature of the indications e.g., "Accession Number of Deposit")

Day of Deposit

Accession Number of Deposit

**E.  This sheet was received with the International application when filed (to be checked by the receiving Office)**

(Authorized Officer)

The date of receipt (from the applicant) by the International Bureau is

was

(Authorized Officer)

**MICROORGANISMS**

Optional Sheet in connection with the microorganism referred to on page 6, line 32-36 of the description:

**A. IDENTIFICATION OF DEPOSIT\***Further deposits are identified on an additional sheet  \*

Name of depositary institution \*

AMERICAN TYPE CULTURE COLLECTION

Address of depositary institution (including postal code and country) \*

12301 Parklawn Drive  
 Rockville, Maryland 20852  
 US

Date of deposit \*

May 1996 ( .05.96)

Accession Number \*

to be furnished when available

**B. ADDITIONAL INDICATIONS\*** (leave blank if not applicable). This information is continued on a separate attached sheet 

In respect of those designations in which a European patent is sought, a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which the application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample. (Rule 28(4) EPC)

**C. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE\*** (If the indications are not for all designated States)**D. SEPARATE FURNISHING OF INDICATIONS\*** (leave blank if not applicable)

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Day of Deposit

Accession Number of Deposit

**E.  This sheet was received with the International application when filed (to be checked by the receiving Office)**

(Authorized Officer)

 The date of receipt (from the applicant) by the International Bureau is

was

(Authorized Officer)

**MICROORGANISMS**

6 36-38

Optional Sheet in connection with the microorganism referred to on page 7, line 1-2 of the description.

**A. IDENTIFICATION OF DEPOSIT:**Further deposits are identified on an additional sheet 

Name of depositary institution:

AMERICAN TYPE CULTURE COLLECTION

Address of depositary institution (including postal code and country):

12301 Parklawn Drive  
 Rockville, Maryland 20852  
 US

Date of deposit:

May 1996 (.05.96)

Accession Number:

to be furnished when available

**B. ADDITIONAL INDICATIONS:** (Leave blank if not applicable). This information is continued on a separate attached sheet 

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Day of Deposit

Accession Number of Deposit

E.  This sheet was received with the International application when filed (to be checked by the receiving Office)

(Authorized Officer)

 The date of receipt (from the applicant) by the International Bureau is

wsb

(Authorized Officer)

**MICROORGANISMS**Optional Sheet in connection with the microorganism referred to on page 7, line 2-6 of the description.**A. IDENTIFICATION OF DEPOSIT\***Further deposits are identified on an additional sheet  \*

Name of depositary institution \*

AMERICAN TYPE CULTURE COLLECTION

Address of depositary institution (including postal code and country) \*

12301 Parklawn Drive  
Rockville, Maryland 20852  
US

Date of deposit \*

May 1996 (.05.96)

Accession Number \*

to be furnished when available

**B. ADDITIONAL INDICATIONS\* (Leave blank if not applicable). This information is continued on a separate attached sheet** 

In respect of those designations in which a European patent is sought, a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which the application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample. (Rule 28(4) EPC)

**C. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE\* (If the indications are not for all designated States)****D. SEPARATE FURNISHING OF INDICATIONS\* (Leave blank if not applicable)**

The indications listed below will be submitted to the International Bureau later\* (Specify the general nature of the indications e.g., "Accession Number of Deposit")

Day of Deposit  
Accession Number of Deposit

E.  This sheet was received with the International application when filed (to be checked by the receiving Office)

(Authorized Officer)

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was

(Authorized Officer)